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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/032,481 | 01/02/2002 | Yong-Seok Song | P56631 | 5616 |

7590 12/04/2002

Robert E. Bushnell
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Washington, DC 20005

EXAMINER

VO, TUYET THI

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

2821

DATE MAILED: 12/04/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/032,481

Applicant(s)

SONG ET AL.

Examiner

Tuyet Vo

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 8-10 and 13 is/are rejected.
- 7) ☐ Claim(s) 5-7, 11, 12 and 14-17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>2</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Specification

The specification has been checked to the extent necessary to determine the presence of all possible minor errors. However, the applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4, 8-10 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Chen (US Pat. 5,350,967).

Chen discloses an electron gun for a color cathode ray tube (Figs. 5-14), the gun comprising:

a cathode (32a, 32b, 32c) emitting an electron beam;

a control electrode (34) having first hole regions (54), each one of the first hole regions including a first rectangular elongated indented portion (112) formed at an output side surface of the control electrode (34), wherein the first hole portion with a circular shape having vertical and horizontal widths equal to each other, the electrode beam passing through the control electrode;

a screen electrode (36) being installed adjacent to the control electrode (34), the screen electrode (36) having second hole regions (118), wherein the second hole regions having circular shape (Fig. 12); and

a plurality of focusing electrodes (38, 40, 42, 44, 46) being sequentially installed from the screen electrode and respectively forming electron beam passing holes having a predetermined shape (Fig. 5), the focusing electrodes form a plurality of quadrupole lenses (col. 10, lines 57-67 and col. 11, lines 1-36).

Allowable Subject Matter

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3. Claims 5-7, 11, 12 and 14-17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4. The following is a statement of reasons for the indication of allowable subject matter: the prior art fails to suggest each one of the second hole regions including a second indented portion formed at an output side surface of the screen electrode and a second hole portion formed in the second indented portion as required in claims 5 and 11. The prior art also lacks to establish plurality of focusing electrodes installed in an order manner related to a control and screen electrodes in that a fourth and fifth focusing electrodes forming a first quadrupole lens and a second quadrupole lens respectively as required in claims 14.

Citation of pertinent prior art

5. The prior art made of record and not relied upon is considered pertinent to applicants' disclosure.

Ju (US Pat. 6,479,927) discloses electrode of electron gun and electron gun using the same.

Choi (US Pat. 6,184,617) discloses electron guns for precluding distortion of beam spots.

Yun et al. (US Pat. 5,600,201) discloses electron gun for a color cathode ray tube.

Suzuki et al. (US Pat. 5,061,881) discloses in-line electron gun.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tuyet Vo whose telephone number is 703 306 5497. The examiner can normally be reached on Mon-Fri.

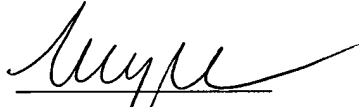
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on 703 308 4856. The fax phone numbers for the organization where this application or proceeding is assigned are 703 308 7722 for regular communications and 703 308 7724 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308 0956.


Tuyet Vo

December 2, 2002